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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/627,386	04/04/96	BAIR	G XEROX-1753-D

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EXAMINER

MILLER, H

ART UNIT

PAPER NUMBER

2515

DATE MAILED: 11/12/96

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/627,386

Applicant(s)

Baur et al.

Examiner

Charles Miller

Group Art Unit

2515



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-19 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-19 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Apr 4, 1996 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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The specification is replete with grammatical and translation errors too numerous to mention specifically. Furthermore, the lengthy specification has not been checked to the extent necessary to determine the presence of all errors. The specification should be revised carefully.

The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electrodes being in two different planes must be shown or the feature canceled from the claim. No new matter should be entered.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-19 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-19 of copending Application Nos. 08/627,387 and 08/627,388. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1,7,9,15-17 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Masubuchi (54-43048).

Masubuchi disclose an electrooptical twisted nematic liquid crystal display screen with a 90° twist, a dichroic dye, comb electrodes, and at least two display states. Figure 4b shows the axis of twist remaining substantially perpendicular to the liquid crystal layer in the twisted and untwisted states. The field is shown parallel to the liquid crystal layer.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 6,10,11 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over Masubuchi (54-43048), as applied to claims 1,7,9,15-17 and 19 above.

Masubuchi discloses a display with a single polarizer and a dichroic dye. It was notoriously well known in the art that a twisted nematic liquid crystal cell requires light to pass through two elements which distinguish polarized light from unpolarized light. It was conventional in the art to use one of the following three art recognized equivalent configurations:

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(1) two polarizers; (2) a single polarizer and a dichroic dye; or (3) a single polarizer with a reflective layer. The third choice has the well known added advantage of not requiring a back light. For these reasons, it would have been obvious to any of the three configurations cited above in the display of Masubuchi.

Masubuchi also illustrate a direct driving means which conventionally use the time multiplex method. It was well known in the art and would have been obvious to drive the switching elements by a transistor matrix to prevent crosstalk.

Regarding claim 6, all twisted nematic displays have a pretilt angle to prevent the problem of reverse tilt. Furthermore, one of ordinary skill in the art would expect the pretilt angle of Masubuchi to fall within the broad range of 0° to 30° .

Claim 12 and 13 are rejected under 35 U.S.C. § 103 as being unpatentable over Masubuchi (54-43048) as applied to claims 6,10,11 and 18 above and further in view of Gelber et al. (3736047).

Masubuchi differs from the claimed invention in that he does not use a dielectric mirror when using the display in the reflective mode.

Gelber et al. teach, in order, a substrate, a dielectric mirror, electrodes and a liquid crystal. They teach using a dielectric mirror because it can withstand high temperatures. See col. 1, lines 5-15 and col. 5, lines 39-46. Therefore, it would have been obvious to one of ordinary skill in the liquid crystal art to provide the dielectric mirror of Gelber et al. between the electrodes and the

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substrate in the device of Masubuchi to form a reflective display which can withstand high temperatures.

Claim 14 is rejected under 35 U.S.C. § 103 as being unpatentable over Masubuchi (54-43048) as applied to claims 6,10,11 and 18, and further in view of Wada et al. (U.S. Patent 4,844,569).

Wada et al. teach the use of compensators to compensate for the elliptical polarization of the incident light.

It would have been obvious to one of ordinary skill in the liquid crystal art to place a compensator between the polarizer and the liquid crystal of the device of Masubuchi compensate for the elliptical polarization of the incident light.

Claims 2-5 are rejected under 35 U.S.C. § 103 as being unpatentable over Masubuchi (54-43048) in view of Mizuno et al (4039252).

Masubuchi teaches a 90° twisted nematic liquid crystal display with comb electrodes. The liquid crystal may have either positive (figure 4) or negative (figure 5) dielectric anisotropy. The positive anisotropic display has a β_0 of 90° and the negative anisotropic display has a β_0 of 0°.

Mizuno et al. teach to use a twisted nematic of from 80° to 85° rather than a 90° twisted nematic to avoid dirty domains in the display. See the abstract and line 66 of column 3.

It would have been obvious to one of ordinary skill in the liquid crystal art to have used a 80°-85° twisted nematic instead of the 90° twisted nematic in the device of Masubuchi to reduce the number of dirty domains as is taught by Mizuno. (This results in β_0 being 80°-85° in the

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positive anisotropic display of figure 4 and β_0 being 5° - 10° in the negative anisotropic display of figure of 5).

Furthermore, it would have at least been obvious to vary the voltage to the electrodes continuously or discretely to change the transmittance either continuously or discretely, in the display of Masubuchi, since such is old and well known in the liquid crystal art.

Claim 8 is rejected under 35 U.S.C. § 103 as being unpatentable over Masubuchi (54-43048) as applied to claims 1,7,9,15-17 and 19 above, and further in view of Haas et al. (3854751).

Haas et al. teach interdigital electrodes connected from one side.

It would have obvious to one of ordinary skill in the liquid crystal art to provide the connections of the interdigital electrodes of the device of Masubuchi and Mizuno et al. to one side as per Haas et al. to reduce the number of edges where connection are required. Since the electrodes in this configuration are not formed from the same film, there will be two different planes in which the electrodes rest. The two planes are shown as the same plane in applicant's figures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Miller whose telephone number is (703) 305-6202.

The fax phone number for this Group is (703) 308-7726.

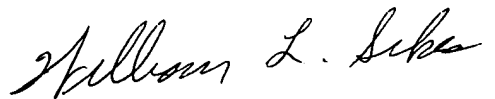
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Any inquiry of a general nature or relating to the status of this application or preceding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

C.m.
Charles Miller
November 7, 1996


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SUPERVISORY PATENT EXAMINER
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